Amendments to the Specification:

Please replace paragraph [0006] with the following amended paragraph:

[0006] Further, when the backside gas with a predetermined pressure ~~is flowed~~ flows between the rear plane of the semiconductor wafer and the insulation layer, an ascending force due to the backside gas is applied to the semiconductor wafer. Therefore, an attraction force actually acting ~~to~~ on the semiconductor wafer becomes such a value that ~~an~~ the ascending force acting from the backside gas to the semiconductor wafer is taken from an attraction force due to electrostatic effects acting from the electrostatic chuck to the semiconductor wafer. In this case, if an area of the contact planes of the projecting portions is decreased as mentioned above, ~~an~~ the ascending force acting to the semiconductor wafer becomes relatively larger, and thus ~~an~~ the attraction force of the semiconductor wafer is not sufficient. In order to eliminate such a drawback, if ~~a~~ the pressure of the backside gas is made smaller, ~~a~~ heat conduction due to the backside gas becomes insufficient, and thus a temperature uniformity of the semiconductor wafer is deteriorated.

Please replace paragraph [0009] with the following amended paragraph:

[0009] Moreover, according to the invention, a substrate processing apparatus wherein a predetermined process is applied to a plane of a substrate, comprises: a process chamber in which the predetermined process is performed; the electrostatic chuck ~~set forth in claim 1~~ used for electrostatically attracting and holding the substrate at a predetermined position in the process chamber; and a power source for attracting.

Please replace paragraph [0010] with the following amended paragraph:

[0010] The present inventors found the ~~followings~~ following and achieved the present invention. That is, even in the case such that a total amount of areas of the contact planes of the projecting portions to be contacted to the wafer is made smaller to a level

of not more than 10% with respect to an area of the inner electrode so as to reduce particle generations, if heights of the projecting portions are controlled to not less than 5 μm and not more than 10 μm, it is possible to effectively perform ~~a~~ heat conduction through the backside gas from the electrostatic chuck to the semiconductor wafer, and thus, it is possible to maintain ~~a~~ high temperature uniformity ~~of~~ for the semiconductor wafer.

Please replace paragraph [0011] with the following amended paragraph:

[0011] This is further explained. Generally, a height of the projecting portion of the electrostatic chuck was about 20 μm, and ~~a~~ heat was conducted by ~~a~~ heat convection between the insulation layer and the semiconductor wafer. Therefore, it was thought that a low height of the projecting portion is not effective upon a heat conduction.

Please replace paragraph [0019] with the following amended paragraph:

[0019] ~~Kinds~~ The kinds of ~~the~~ processes with respect to the substrate are not limited, but mention may be made of finely working e.g., transferring, exposing, film-forming by CVD, washing, etching, and dicing the semiconductor wafers.

Please replace paragraph [0020] with the following amended paragraph:

[0020] ~~A~~ The kind of ~~the~~ substrate is not limited, but it is preferred to use ~~the~~ a semiconductor wafer.

Please replace paragraph [0027] with the following amended paragraph:

[0027] According to the invention, ~~a~~ the total amount of the areas of the top planes 14 of the projection portions 3A that are ~~(~~contact planes with respect to the semiconductor wafer~~) of the projection portions 3A~~ is not less than 5% and not more than 10% ~~with respect to an~~ of this area of the inner electrode 12. Moreover, a height

H of the projecting portion 3A is set to not less than 5 μm and not more than 10 μm.

Please replace paragraph [0028] with the following amended paragraph:

[0028] In the present invention, ~~a~~ the diameter of respective projecting portions can be varied in various ways, but it is preferred to set such a diameter to 1.0 - 2.0 mm from a point of view of achieving ~~a~~ temperature uniformity ~~of~~ for the wafer.

Please replace paragraph [0029] with the following amended paragraph:

[0029] Moreover, a two-dimensional shape and a two-dimensional size are varied in various ways. For example, ~~a~~ the shape of the contact plane of the projecting portion may be polygonal shape such as triangular shape, quadrangle shape, hexagonal shape, octagonal shape and so on other than circular shape. Moreover, the number of the projecting portions is not particularly limited. However, in order to make ~~an attraction~~ the attractive force with respect to the semiconductor wafer uniform on all the planes of the semiconductor wafer, it is particularly preferred to set the number of the projecting portions per a unit area to 0.010 - 0.140 ~~piece~~pieces/mm^2.

Please replace paragraph [0036] with the following amended paragraph:

[0036]

(~~Experiment~~Example) The electrostatic chuck having the shape shown in Figs. 1 and 2 was produced. Specifically, aluminum nitride powders were formed into a specific shape to obtain a formed body. Then, the inner electrode made of molybdenum was arranged on the thus obtained formed body, and aluminum nitride powders are filled thereon. After that, the forming process was performed again to obtain the disc-shaped formed body in which the inner electrode was embedded. Then, the thus obtained formed body was sintered in nitrogen atmosphere to produce the insulation layer 2 having a diameter of 200 mm in which the inner electrode was embedded.

Please replace paragraph [0038] with the following amended paragraph:

[0038] An area of the inner electrode 12 was 31000 mm^2. By varying ~~an~~ the area of the contact plane 14 of the projecting portion 3A and the number of the projecting portions 3A in various ways, the percentages of the total amounts of the areas of the contact planes 14 with respect to an area of the inner electrode 12 were varied as shown in the following Table 1 and Table 2. Moreover, the heights H of the projecting portions 3A were also varied as shown in the following Table 1 and Table 2.